1898MNRAS..58..369.

# MONTHLY NOTICES

OF THE

# ROYAL ASTRONOMICAL SOCIETY.

VOL. LVIII. MAY 13, 1898. No. 7

Sir R. S. BALL, LL.D., F.R.S., President, in the Chair.

George Banaster, The Mythe Villa, Tewkesbury;
Edward I. Essam, Billingborough, Lincolnshire;
The Hon. George Stuart Forbes, I.C.S., Revenue Secretary to the Government of Madras, Madras, India; and
The Rev. William Edward Winks, 58 Richmond Road, Cardiff, South Wales,

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended:—

Cecil Goodrich Julius Dolmage, M.A., LL.D., 22 Upper Merrion Street, Dublin (proposed by J. E. Gore); and

Andrew Ellicott Douglass, B.A., Lowell Observatory, Flagstaff, Arizona, U.S.A. (proposed by T. J. J. See).

F F

Downloaded from http://mnras.oxfordjournals.org/ at NERL on April 12, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System

1898MNRAS..58..369.

Seventy-five presents were announced as having been received since the last meeting, including, amongst others :—

Harvard College Observatory Circular, No. 28 ; Photographic Spectrum of the Aurora, presented by the Observatory ; T. R. Dallmeyer, A simple guide to the choice of a photographic lens, presented by the author ; Two photographs of the total solar eclipse of 1898 January 22, taken by the Lick Observatory Expedition (lantern slides), presented by the Lick Observatory.

## *Vanadium in the Spectrum (C to D) of Sun-spots.* By the Rev. A. L. Cortie, S.J.

In a former paper, entitled "Observations of the Spectra of Sun-spots in the region B – D" (*Memoirs R.A.S.* vol. l. p. 51), I called attention to a line near w.l. 6243·5, which was only just visible in the ordinary solar spectrum, but was very greatly widened when it crossed a spot. Since the publication of this paper my observations of the spot-spectra have been somewhat desultory, but in those which I have secured this line has been always most marked, being one of several faint lines in this region which are permanent and characteristic of the spectra of all spots. That this judgment is unbiassed is evidenced by the fact that, after a long break in the observations, when the region had become less familiar to me, and I had frequently to consult Mr. Higgs's beautiful maps while observing, the same line always claimed attention. The publication of Professor Rowland's "Preliminary Table of Solar Spectrum Wave-lengths" in the *Astrophysical Journal* has enabled me to fix the widening as almost certainly due to the very faint Vanadium line at 6243·055. The line is invisible in the ordinary spectrum with the Browning 12-prism spectroscope, but it can be seen in the second order of the grating spectroscope, and on 1891 September 7 over a spot, when it was clearly separated from the adjoining line at 6243·32, it was very much widened. Hence I conclude that the remarkable widening of the line, seen only across spots with the prism spectroscope in this position, is due to the Vanadium line. Moreover, its sympathy with the widening of other lines due to this metal is a further proof of its identity. Among such is a faint line at 6039·953 which is also much widened in all sun-spots. This has led me to study the behaviour of all the Vanadium lines catalogued in Professor Rowland's lists between C and D in the spectrum of sun-spots. The results are collected in the following table :—

Downloaded from http://mnras.oxfordjournals.org/ at NERL on April 12, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System